Prediction of Safety Incidents

Completed Technology Project (2017 - 2019)

Project Introduction

Safety incidents, including injuries, property damage and mission failures, cost NASA and contractors thousands of dollars in direct and indirect costs. This project seeks to define, develop and test an algorithm(s) that will use hazard identification data as input to predict when and where there is a high probability of a safety incident occurring so that resources and attention can be appropriately matched based to the priority of concern.

Anticipated Benefits

NASA /SSC and other centers will benefit from this project through bringing additional value to data already collected and in informing future data collection needs. While this pilot study will be based on facilities, the resulting algorithm will also be relevant to programs and projects which collect similar data based on program hardware. These algorithms could have value for prediction of facility safety issues well beyond NASA into commercial environments as well and help optimize expenditure of resources for safety in a variety of facilities.

Primary U.S. Work Locations and Key Partners

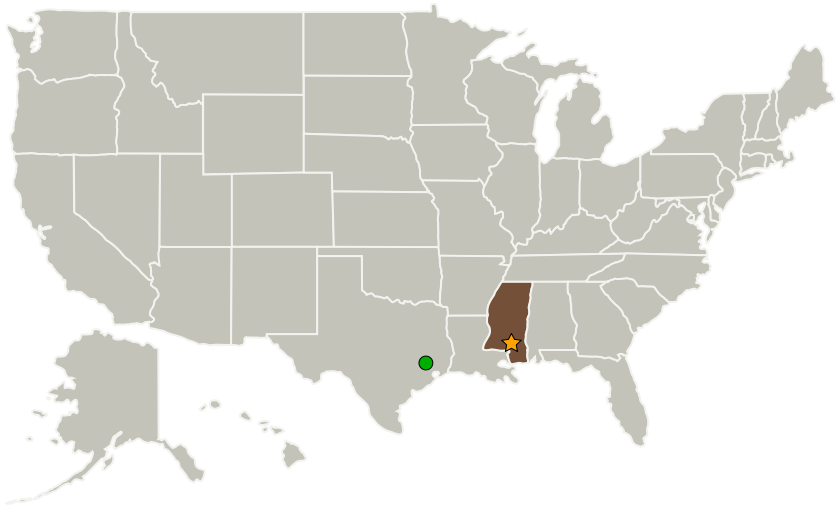

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Table of Contents

Project Introduction	1
Anticipated Benefits	1
Primary U.S. Work Locations and Key Partners	1
Organizational Responsibility	1
Project Website:	2
Project Management	2
Technology Maturity (TRL)	2
Technology Areas	2
Target Destinations	2

Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Stennis Space Center (SSC)

Responsible Program:

Center Innovation Fund: SSC CIF

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Organizations Performing Work	Role	Type	Location
★Stennis Space Center(SSC)	Lead Organization	NASA Center	Stennis Space Center, Mississippi
●Johnson Space Center(JSC)	Supporting Organization	NASA Center	Houston, Texas

Co-Funding Partners	Type	Location
Office of Safety and Mission Assurance(OSMA)	NASA Office	

Primary U.S. Work Locations
Mississippi

Project Website:

https://www.nasa.gov/directorates/spacetech/innovation_fund/index.html#.VQ

Project Management

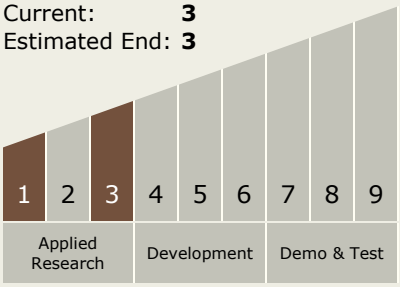
Program Director:
Michael R Lapointe

Program Manager:
Ramona E Travis

Principal Investigator:
Kamili M Shaw

Technology Maturity (TRL)

Start: **1**
Current: **3**
Estimated End: **3**



Technology Areas

Primary:

- TX16 Air Traffic Management and Range Tracking Systems
  - TX16.3 Traffic Management Concepts

Target Destinations

The Moon, Mars, Earth